

REMARKS

Claims 2-7 and 11 are amended. New claims 12-20 are added. Claim 1 is cancelled.

Accordingly, claims 2-20 are pending in the application.

Reexamination and reconsideration of this patent application are respectfully requested in view of the following Remarks

OBJECTIONS TO THE DRAWINGS

Please find attached to this paper, new drawings for FIGs. 1a-d, FIG. 3A, FIG. 4, and FIGS. 5A-5C, correcting minor informalities noted by the Examiner.

The objection that FIG. 3A should somehow be inverted is respectfully traversed, as Applicants are unaware of any rule which specifies a particular angle or viewpoint from which an object must be shown.

Applicants respectfully traverse the objections to FIG. 4 that: (1) FIG. 4 shows an apparently non-linear graph; and (2) FIG. 4 does not extend above 150 nm.

There is nothing that requires that FIG. 4 show a linear graph. The text in the specification cited by the Office Action is clearly permissive in nature ("may") as opposed to stating any exacting, rigorous requirement. Moreover, the graph in FIG. 4 actually does observe the stated relationship over the range of 25-125 nm. So FIG. 4 amplifies and expands upon the exemplary language in the specification, without being inconsistent therewith. Therefore, Applicants respectfully traverse this objection to FIG. 4.

Furthermore, there is no requirement that FIG. 4 plot any relationship for auxiliary pattern line widths above 150 nm. Indeed, the drawings would satisfy the requirements of 37 C.F.R. § 1.84(b) for claims 6 and 11 even if FIG. 4 was deleted in its entirety! That is, claims 6 and 11 include a feature pertaining to an auxiliary pattern, particularly, **a line width** of the auxiliary pattern. FIGs. 3A and 5C show the auxiliary pattern, including a line width of the auxiliary pattern, thereby satisfying the requirements of 37 C.F.R. § 1.84(b). Meanwhile, FIG. 4 does not show any auxiliary

pattern at all, and therefore certainly cannot possibly illustrate a line width of an auxiliary pattern! Instead, FIG. 4 shows a **graphical relationship** between a line width of an auxiliary pattern and a line width of a photoresist pattern. Now ***if*** claims 6 and 11 recited such a relationship, and if they recited that relationship over a range where the auxiliary pattern line width that exceeded 150nm, then the Examiner's objection **might** have merit. But that is not what is claimed here. Meanwhile, the features that actually *are* recited in claims 6 and 11 are shown in FIGs. 3A and 5C. Therefore, Applicants also respectfully traverse this objection to FIG. 4.

Accordingly, Applicants respectfully request that the objections to the drawings be withdrawn.

OBJECTIONS TO THE SPECIFICATION

Applicants have amended pertinent portions of the specification as requested by the Examiner.

CLAIM OBJECTIONS

Claims 2 and 7-11 have been amended to address the minor informalities identified by the Examiner.

35 U.S.C. § 112

The Office Action rejects claims 3 and 8 under §112, first paragraph, as supposedly not being enabled by the specification.

Applicants respectfully traverse those rejections.

MPEP § 2164.01 provides that the test for ***enablement*** of the claims is:

“whether [the] disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention.”

That is, the test is not, as alleged by the Examiner, whether the specification adequately defines or provides any working examples, but instead “*whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation.*” United States v. Teletronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988)

Indeed, the MPEP § 2164.02 specifically provides that “*Compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, does not turn on whether an example is disclosed*” (emphasis added), and further provides that a “*lack of working examples or lack of evidence that the claimed invention works as described should never be the sole reason for rejecting the claimed invention on the grounds of lack of enablement. A single working example in the specification for a claimed invention is enough to preclude a rejection which states that nothing is enabled since at least that embodiment would be enabled.*”

MPEP § 2164.01(b) also provides that “*As long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope of the claim, then the enablement requirement of 35 U.S.C. 112 is satisfied.*” In re Fisher, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). “*The specification need not contain an example if the invention is otherwise disclosed in such manner that one skilled in the art will be able to practice it without an undue amount of experimentation.*” In re Borkowski, 422 F.2d 904, 908, 164 USPQ 642, 645 (CCPA 1970). See MPEP § 2160.02.

The Office Action alleges that the Applicants have failed to show how to make and use the invention for one skilled in the art. However, the specification on paragraph [0095] discloses that an auxiliary pattern is a pattern *that causes optical interference*. Chromium, although disclosed in the specification as an opaque material, is also a material that also causes optical interference. Based on the chromium disclosure and the disclosure as a whole, one reasonably skilled in the art

can make and/or use the invention without undue experimentation; therefore, the Applicants respectfully submit that claims 3 and 8 are enabled by the specification.

Accordingly, for at least these reasons, Applicants respectfully request that the rejections of claims 3 and 8 under 35 U.S.C. § 112 be withdrawn.

Also, claims 1-6 were reject under 35 U.S.C. § 112, second paragraph.

Applicants have amended claims 2, 7 and 11. Specifically, the “relative” terms “top” and “bottom” surfaces have been replaced with the terms “first” and “second” surfaces, respectively.

Accordingly, Applicants respectfully submit that the rejections of claims 1-6 under 35 U.S.C. § 112, second paragraph have now been overcome.

35 USC § 102/103

Applicants respectfully submit that all of the claims 2-20 are patentable over Ham U.S. patent 5,567,552 (“Ham”) alone, or in combination with Randall et al. U.S. patent application publication 2002/0094492 (“Randall”) for at least the following reasons.

Independent claims 7, 14 and 16 all include a feature wherein when the mask is used to pattern a photoresist layer, photoresist patterns are formed at areas corresponding to edges of the trench, and are not formed at areas corresponding to the auxiliary pattern. Such a combination of features is described throughout the specification, for example in paragraphs [0075], [0090], [0095], and [0100], and shown in FIGs. 3A-B.

Applicants respectfully submit that neither Ham, Randall, nor any proper combination thereof includes such a feature.

Meanwhile, claims 2-6, 8-13, 15 and 17-20 all depend variously from claims 7, 14 and 16.

Accordingly, for at least the reasons above, the Applicants respectfully submit that claims 2-20 are all patentable over the cited prior art.

CONCLUSION


For all of the foregoing reasons, Applicants respectfully submits that claims 2-20 are all patentable over the cited prior art. Therefore, Applicants respectfully request that claims 2-20 be allowed, and that the application be passed to issue.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 50-0238 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17, particularly extension of time fees.

Respectfully submitted,

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FIG. 3A

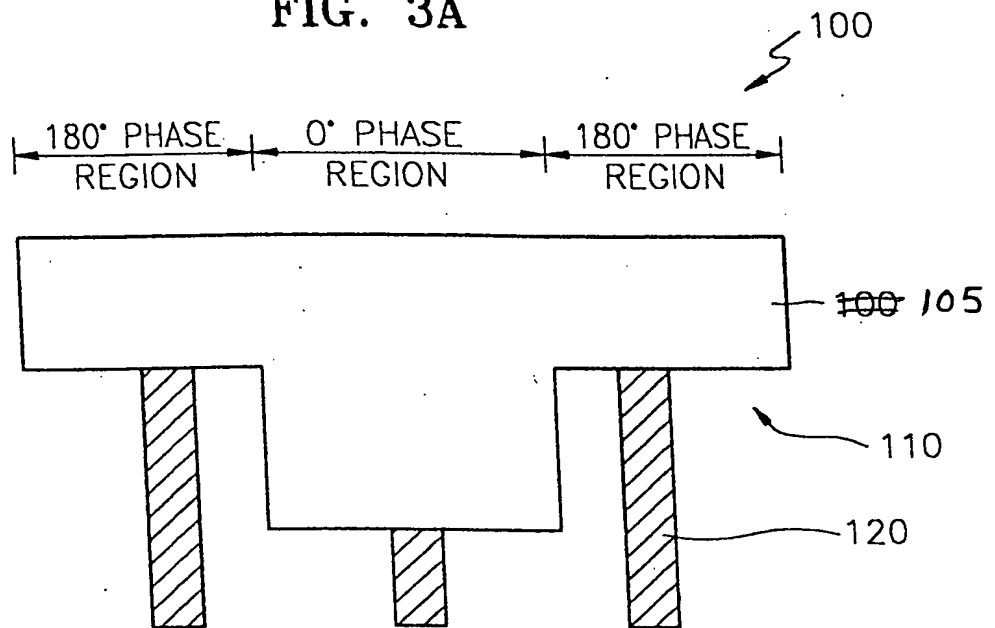


FIG. 3B

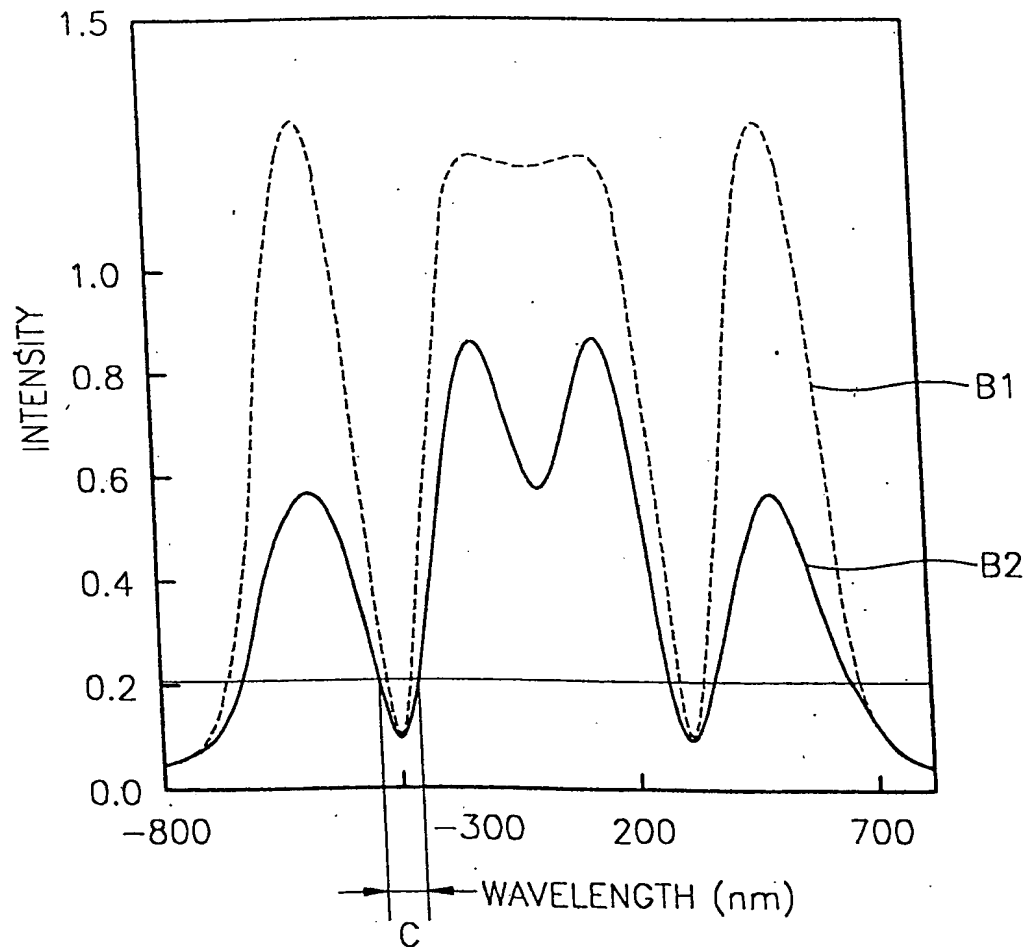


FIG. 4

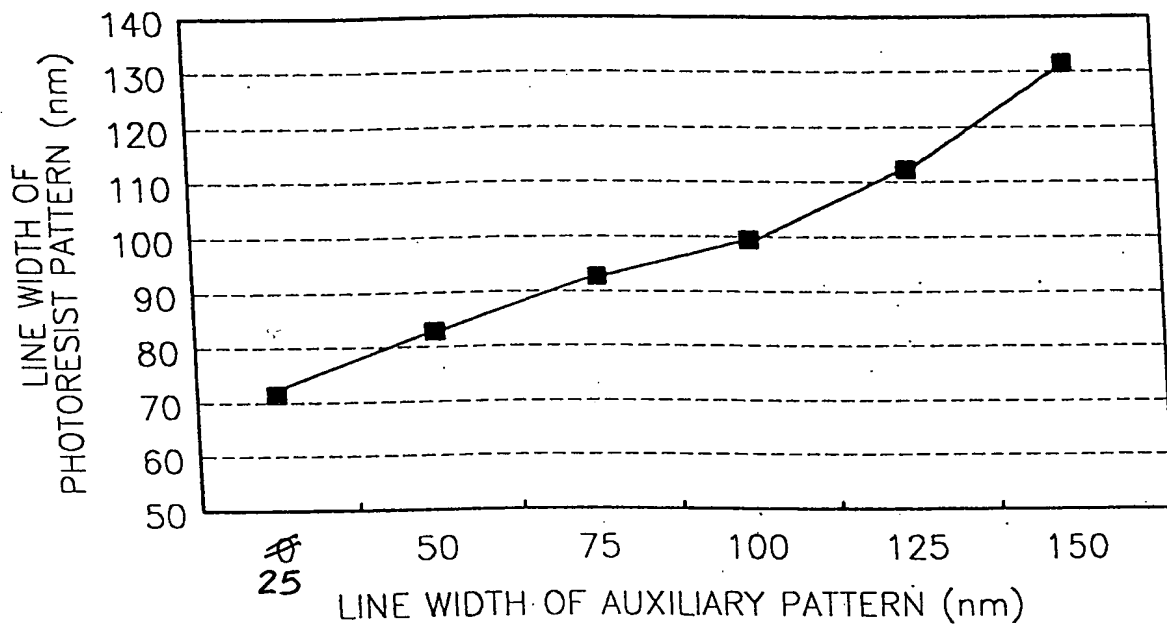


FIG. 5A

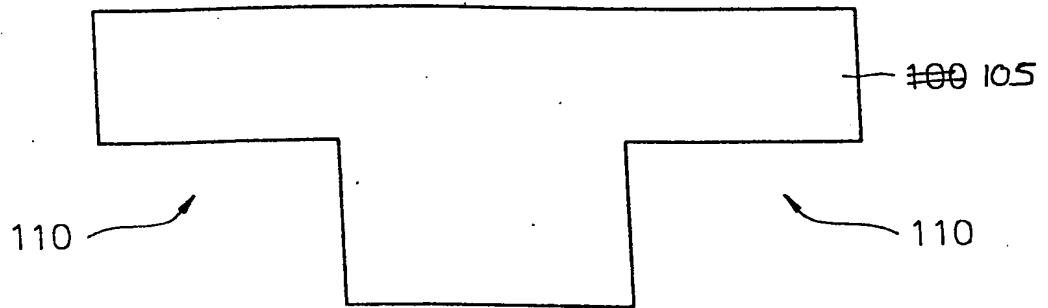


FIG. 5B

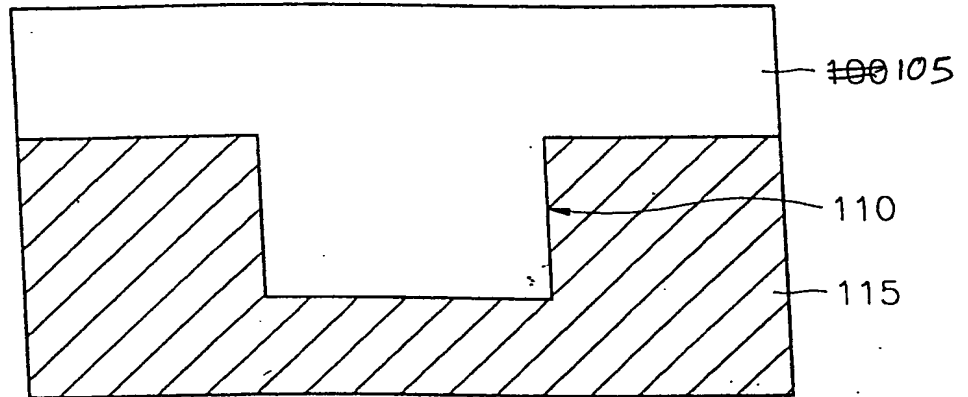


FIG. 5C

